

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**APPLICANT:** Jean-Pierre Giraud**Group Art Unit:** 3727**SERIAL NOS.:** 09/865,792**Examiner:** S. Pollard**FILED:** May 25, 2001**Attorney Docket No.:** 5094.056**TITLE:** Dual Wall Insulated Cup Assembly
And A Method of Manufacturing
An Insulated Cup AssemblyFAX RECEIVED
MAR 12 2003
GROUP 3700**CERTIFICATE OF FACSIMILE****Attention:** Examiner Steven Pollard

As you requested, attached are the following from the corresponding PCT patent application (PCT/US01/49073):

- 1) International Search Report (prior to the preliminary amendment); and
- 2) Written Opinion (after the amendment to the claims).

The pending claims in the above-identified U.S. application are similar to the pending PCT claims.

Please do not hesitate to contact me with any additional questions. I look forward to an early disposition of this matter.

Number of pages including Facsimile cover page 17.

Respectfully submitted,
GREENBERG TRAURIG

Dated: March 12, 2003

Barry J. Schindler

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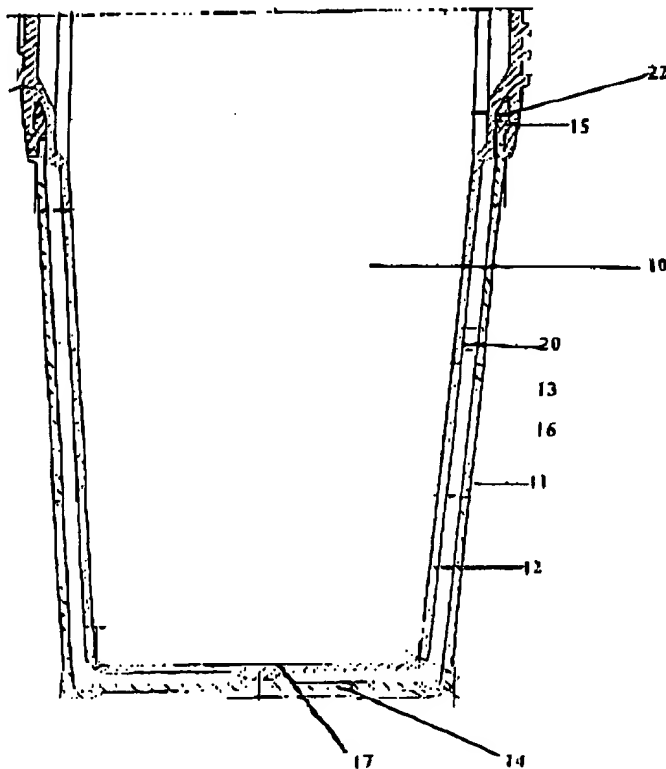
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1

(10) International Publication Number
WO 02/049924 A3

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(21) International Application Number: **PCT/US01/49073**
(22) International Filing Date:
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09/865,792 25 May 2001 (25.05.2001) US
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NL, PT, SE, TR).
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— with international search report
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22 August 2002

[Continued on next page]

(54) Title: A DUAL WALL INSULATED CUP ASSEMBLY AND A METHOD OF MANUFACTURING AN INSULATED CUP ASSEMBLY



(57) Abstract: A cup assembly (10) having an open end (15), comprising: (a) a dual wall cup assembly comprising: (i) an outer cup (11) having a truncated conical-like shape with side wall, larger top and smaller end, the end is closed and sealed by bottom wall (14) and the top is open (15); (ii) an inner cup (12) having a truncated conical-like shape with side wall (13), larger top and smaller end, the end is closed and sealed by bottom wall (17); and (iii) the inner cup is configured to be receivable within the outer cup to create a gap (20) between the bottom walls; and (b) the cup assembly is a child spill-proof cup.

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INTERNATIONAL SEARCH REPORT

 International application No.
PCT/US01/49073

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B65D 6/00

US CL : 290/502.27

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 290/502.27, 62, 12, 502.17,

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2,863,585 A (MESHBERG) 09 December 1958, See fig. 2	1-99
Y	US 3,225,954 A (HERRICK, ET. AL.) 28 December 1965, See fig. 1-4	1-99
Y	US 3,295,709 A (HERRICK, ET. AL.) 03 January 1967, See fig. 1	1-99
A	US 6,010,027 A (FUJII, ET. AL.) 04 January 2000	
Y	US 6,050,443 A (TUNG) 18 April 2000, See fig. 1 - 4	1-99
Y	US 5,894,948 A (YEH) 20 April 1999, See the entire document.	1-99

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	* "a" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" documents defining the general state of the art which is not considered to be of particular relevance	* "x" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"B" earlier document published on or after the international filing date	* "y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"C" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	* "g" document member of the same patent family
"D" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

06 MAY 2002

Date of mailing of the international search report

29 MAY 2002

 Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

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Authorized officer

STEVEN M. POLLARD

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 Shella Vane
Paralegal Specialist
Group 3700

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: BARRY J. SCHINDLER
DREIER & BARITZ, LLP
499 PARK AVENUE
NEW YORK, NEW YORK 10022

PCT

WRITTEN OPINION

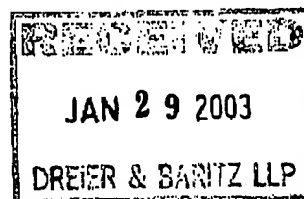
(PCT Rule 66)

Date of Mailing (day/month/year) 24 JAN 2003	
Applicant's or agent's file reference PCT/US01/49073	REPLY DUE within TWO months from the above date of mailing
International application No. PCT/US01/49073	International filing date (day/month/year) 18 DECEMBER 2001
Priority date (day/month/year) 18 DECEMBER 2000	
International Patent Classification (IPC) or both national classification and IPC IPC(7): B65D 6/00 and US Cl.: 220/592.27	
Applicant CAPITOL INSULATED PRODUCTS INC.	

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application



3. The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. ~~The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.4(b).~~

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 18 APRIL 2003

Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box 147 Washington, D.C. 20531	Authorized officer STEVEN M. POLLARD
Facsimile No. (703) 905-3930	Telephone No. (703) 908-1099

WRITTEN OPINION

International application No.

PCT/US01/49073

I. Basis of the opinion

1. With regard to the elements of the international application:*

☐ the international application as originally filed☒ the description:

pages (See Attached)

, as originally filed

pages , filed with the demand

pages , filed with the letter of

☒ the claims:

pages (See Attached)

, as originally filed

pages , as amended (together with any statement) under Article 19

pages , filed with the demand

pages , filed with the letter of

☒ the drawings:

pages (See Attached)

, as originally filed

pages , filed with the demand

pages , filed with the letter of

☒ the sequence listing part of the description:

pages (See Attached)

, as originally filed

pages , filed with the demand

pages , filed with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).☐ the language of publication of the international application (under Rule 48.3(b)).☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

☐ contained in the international application in printed form.☐ filed together with the international application in computer readable form.☐ furnished subsequently to this Authority in written form.☐ furnished subsequently to this Authority in computer readable form.☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. ☒ The amendments have resulted in the cancellation of:☒ the description, pages (See Attached)☒ the claims, Nos. (See Attached)☒ the drawings, sheets/fig (See Attached)5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".

WRITTEN OPINION

International application No.

PCT/US01/49079

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. statement

Novelty (N)

Claims	<u>(Please See supplemental sheet)</u>	YES
Claims	<u>(Please See supplemental sheet)</u>	NO

Inventive Step (IS)

Claims	<u>(Please See supplemental sheet)</u>	YES
Claims	<u>(Please See supplemental sheet)</u>	NO

Industrial Applicability (IA)

Claims	<u>(Please See supplemental sheet)</u>	YES
Claims	<u>(Please See supplemental sheet)</u>	NO

2. citations and explanations

Claims 9, 10, 12-18, 29, 30, 32-37, 40, 41, 43-48, and 53-61 lack an inventive step under PCT Article 33(3) as being obvious over Martin in view of Bachman, et. al. It would have been obvious to one of ordinary skill in the art to have employed the spouted cap teaching set forth in Bachman, et. al. in the construction of the device of Martin, motivated by the spill proof achieved thereby. The degree of insulating ability employed, sufficient impact strength, volume, materials, and the dimensions employed would have been an obvious matter of engineering design choice, motivated by the desired result.

Claims 9, 10, 12-18, 29-30, 32-37, 40, 41, 43-48 and 53-61 meet the criteria under PCT Article 33(4), because the subject matter claimed can be made or used in industry.

NEW CITATIONS

US 2,895,636 A (MARTIN) 21 JUNE 1959, see Fig. 2 and 5

US 5,890,621 A (BACHMAN, ET. AL.) 06 APRIL 1999, see Fig. 2 and 3

WRITTEN OPINION

Internat application No.

PCT/US01/49079

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Sheet 10

Continuation of: Boxes I - VIII

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

I. BASIS OF OPINION:

This opinion has been drawn on the basis of the description:
page(s) 1-26, as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
NONE

This opinion has been drawn on the basis of the claims:
page(s) NONE, as originally filed.
page(s) NONE, as amended under Article 19.
page(s) NONE, filed with the demand.
and additional amendments:
Pages 27-36, filed with the letter of 31 October 2002

This opinion has been drawn on the basis of the drawings:
page(s) 1-11, as originally filed.
page(s) NONE, filed with the demand.
and additional amendments:
NONE

This opinion has been drawn on the basis of the sequence listing part of the description:
page(s) NONE, as originally filed.
pages(s) NONE, filed with the demand.
and additional amendments:
NONE

The amendments have resulted in the cancellation of the description, page(s) NONE.
The amendments have resulted in the cancellation of the claims, No(s). 1 - 8, 11, 19 - 28, 31, 38, 39, 42, 49 - 52.
The amendments have resulted in the cancellation of the drawings, sheet(s) NONE.

V. I. REASONED STATEMENTS:

The opinion as to Novelty was positive (YES) with respect to claims 9, 10, 12-18, 29, 30, 32-37, 40, 41, 43-48, 53-61.

The opinion as to Novelty was negative (NO) with respect to claims NONE.

The opinion as to Inventive Step was positive (YES) with respect to claims NONE.

The opinion as to Inventive Step was negative (NO) with respect to claims 9, 10, 12-18, 29, 30, 32-37, 40, 41, 43 - 48, 53-61.

The opinion as to Industrial Applicability was positive (YES) with respect to claims 9, 10, 12-18, 29, 30, 32-37, 40, 41, 43-48, 53-61.

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE.

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9. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; and (iii) the inner cup is configured to be receivable within the outer cup to create a sealed gap between the side walls of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls of the outer and inner cups;

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about 100 minutes to reach 70°F when tested by cup insulation test method.

10. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; and (iii) the inner cup is configured to be receivable within the outer cup to create a sealed gap

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REVUS 31 OCT 2002

between the side walls of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls of the outer and inner cups;

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about twice the time to reach 70°F compared to a comparable single wall cup, which is made of the same thermoplastic material of the outer cup and substantially the same size and shape of the outer cup, when tested by cup insulation test method.

12. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; and (iii) the inner cup is configured to be receivable within the outer cup to create a sealed gap between the side walls of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls of the outer and inner cups;

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed

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integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about twice the time to reach 70°F compared to a comparable single wall cup, which is composed of the same thermoplastic material of the outer cup and substantially the same size and shape of the outer cup, when tested by cup insulation test method; and

(e) the dual wall assembly provides sufficient impact strength so that the cup assembly does not crack or break when tested by drop test method.

13. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic, with side wall, a top and an end, the end is closed and sealed by a bottom wall; (iii) the side wall thickness of the inner and outer cups are about 0.05 to about 0.06 inches; and (iv) the inner cup is configured to be receivable within the outer cup to create a sealed gap between the side wall of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls wherein the gap is about 0.06 to about 0.08 inches;

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

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(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about 100 minutes to reach 70°F when tested by cup insulation test method.

14. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; (iii) the side wall thickness of the inner and outer cups are about 0.03 to about 0.08 inches; and (iv) the inner cup is configured to be receivable within the outer cup to create a sealed gap between side wall of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls wherein the sealed gap is about 0.04 to about 0.1 inches;

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about 100 minutes to reach 70°F when tested by cup insulation test method.

15. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a

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thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; (iii) a curve region at a bottom outside edge of the outer cup having a thickness greater than the wall thickness of the outer cup and a notch in a curve region at a bottom inside edge of the outer cup; and (iv) the inner cup is configured to be receivable within the outer cup to create a sealed gap between side wall of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls;

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about 100 minutes to reach 70°F when tested by cup insulation test method.

16. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; (iii) a curve region at a bottom outside edge of the outer cup having a thickness greater than the wall thickness of the outer cup and a notch in a curve region at a bottom inside edge of the outer cup

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wherein the notch has a minor radius of about 0.02 to about 0.06 inches and a major radius of about 0.1 to about 0.3 inches; and (iv) the inner cup is configured to be receivable within the outer cup to create a sealed gap between side wall of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls; and

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about 100 minutes to reach 70°F when tested with cup insulation test method.

17. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; (iii) the side wall thickness of the inner and outer cups are about 0.03 to about 0.08 inches (iv) a curve region at a bottom outside edge of the outer cup having a thickness greater than the wall thickness of the outer cup and a notch in a curve region at a bottom inside edge of the outer cup; and (v) the inner cup is configured to be receivable within the outer cup to create a sealed gap between side wall of an inner surface of the outer cup and an outer surface of the inner

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cup and between the bottom walls wherein the sealed gap is about 0.04 to about 0.1 inches; and

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about 100 minutes to reach 70°F when tested with cup insulation test method.

18. A cup assembly having an open end, comprising:

(a) a dual wall cup assembly comprising: (i) an outer cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall and the top is open; (ii) an inner cup made of a thermoplastic material, with a side wall, a top and an end, the end is closed and sealed by a bottom wall; and (iii) the inner cup is configured to be receivable within the outer cup to create a sealed gap between the side walls of an inner surface of the outer cup and an outer surface of the inner cup and between the bottom walls of the outer and inner cups;

(b) air is in the sealed gap;

(c) the cup assembly is a child spill-proof cup that has a removably mounting cap thereon, the cap has a spout that projects from a side upwardly, the spout is formed integrally with the cap and includes a front and rear walls that converge to an outwardly protruding tip of the spout, and a valve located adjacent to or incorporated into the spout

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wherein the valve substantially prevents a liquid from leaking out of the spout; and

(d) the dual wall assembly provides sufficient insulation ability so that the cup assembly takes at least about 100 minutes to reach 70°F when tested with cup insulation test method.

29. The cup assembly of claim 9 having a valve located adjacent to or incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

30. The cup assembly of claim 10 having a valve located adjacent to or incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

32. The cup assembly of claim 12 having a valve located adjacent to or incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

33. The cup assembly of claim 13 having a valve located adjacent to or incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

34. The cup assembly of claim 14 having a valve located adjacent to or incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

35. The cup assembly of claim 15 having a valve located adjacent to or incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

36. The cup assembly of claim 16 having a valve located adjacent to or

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incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

37. The cup assembly of claim 17 having a valve located adjacent to or incorporated into the spout wherein the valve substantially prevents a liquid from leaking out of the spout.

40. The cup assembly of claim 29 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

41. The cup assembly of claim 30 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

43. The cup assembly of claim 32 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

44. The cup assembly of claim 33 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

45. The cup assembly of claim 34 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

46. The cup assembly of claim 35 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

47. The cup assembly of claim 36 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

48. The cup assembly of claim 37 wherein the inner cup is sufficiently sized to hold about 6 to about 9 ounces of liquid.

53. The cup assembly of claim 40 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.

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54. The cup assembly of claim 41 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.
55. The cup assembly of claim 42 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.
56. The cup assembly of claim 43 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.
57. The cup assembly of claim 44 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.
58. The cup assembly of claim 45 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.
59. The cup assembly of claim 46 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.
60. The cup assembly of claim 47 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.
61. The cup assembly of claim 48 wherein the cup assembly is formed from a plastic selected from the group consisting of polypropylene, polyethylene and polyester.